

# **ANNEX D**

## **ATTACHMENT 2**

### **MARINE DIESEL (BUNKER) FUEL REQUIREMENTS**

The Defense Fuel Supply Center and/or the Navy Petroleum Office issue and maintain contracts throughout the world for marine diesel fuel. Regulations mandate that where such Government contracts are presently in place, they will be used in lieu of open market purchases. In ports or countries where there are no existing contracts, the Contractor shall be arrange for delivery of marine diesel fuel in accordance with the requirements of individual delivery orders, including quantities and delivery schedules specified. All marine diesel fuel shall be obtained in full compliance with all DoD and/or Navy policies and procedures applicable to the purchase of fuel which are current at the time each delivery order is issued. Fuel shall be ordered in U.S. gallons (whole numbers ONLY) for domestic locations, and in metric tons (rounded up to a maximum of two decimal places) for overseas locations. In addition, all fuel purchased for delivery to U.S. vessels shall meet the following minimum quality standards:

A. LOADING TEMPERATURE: Product offered to U.S. Navy and Coast Guard vessels (excluding those vessels controlled by the Military Sealift Command) shall not exceed 49°C (120°F) temperature at time of delivery. On all other bunkering the product shall be at least 5.5°C (10°F) below the flash point of the oil, and in no case higher than 66°C (150°F) if the tanks are uncoated, or 57°C (135°F) if coated; PROVIDED that in no event shall the difference between the temperature of the oil entering the tanker manifold and the recorded temperature of the sea water at the tanker's condenser intake exceed 39°C (70°F); and PROVIDED that the master of the vessel (ship's Commanding Officer) may authorize loading the product at a temperature higher than specified herein as long as the temperature of the product remains at least 5.5°C (10°F) below the flash point of the product.

B. DIESEL FUEL: The Contractor shall supply distillate product as ships' bunkers (off-highway use). Products to be provided are Commercial Marine Gas Oil, Fuel Naval Distillate, Fuel Oil #6, Diesel Fuel #2 and Intermediate Grades 180 and 380 , in accordance with the following MINIMUM specifications:

COMMERCIAL MARINE GAS OIL		
TEST	METHOD	REQUIREMENTS
(suitable for Marine Gas Turbine)		
1. Cetane Number or Cetane Index	ASTM D 615 ASTM D 976	42 min 43 min
NOTE: A Cetane Number of 46 minimum or a Cetane Index of 46 minimum is acceptable provided the 90 percent Distillation Point does not exceed a maximum of 335°.		
2. Appearance@21°C/ambient temp (whichever higher) or Water & Sediment	Visual ASTM D 2709	Clear & Bright 0.05 vol% max
3. Distillation, 90% point	ASTM D 86	357°C max
4. Flash Point	ASTM D 93	60°C min
NOTE: The flash point value is absolute and no value less than 60°C is permissible.		
5. Cloud Point	ASTM D 93	-22°C min
NOTE: Cloud Point shall be within 1°C of the specified value.		
6. Viscosity @ 40°C	ASTM D 445	300 cP max
7. Color	ASTM D 1500	3 max
NOTE: FOR DOMESTIC USES, the color of the fuel shall not exceed 3 units when measured by the method specified in ASTM D 1500. For other uses, the color shall be as specified by the purchaser.		
8. Density @ 15°C	ASTM D 1298	876 kg/m <sup>3</sup> max
9. Carbon Residue on 10% bottom	ASTM D 452 ASTM D 159	0.1 max 0.1 max
10. Ash	ASTM D 482	100 max
11. Sulfur	ASTM D 4294, ASTM D 1552, ASTM D 2622	1.0 mass % max
12. Corrosion	ASTM D 130	3 max
13. Distillate Fuel (fuel shall contain no residual)	None	100%

**DIESEL FUEL** (product shall conform to latest revision of ASTM D 975)

NSN	NOMEN	CODE	DFSC PRODUCT CONTENT	MAX-SULFUR RED DYE
9140-00-286-5294	Grade No. 2-D		DF2	0.50 wt% Yes

**Requirements:**

(i) The maximum cloud point shall be equal to or lower than the tenth percentile minimum ambient temperature for the area in which ambient temperatures for U.S. locations are show in Appendix X2 of ASTM D 975.

(ii) Total particulate level as measure by ASTM D 5452 shall not exceed 10 mg/L.

(iii) the Internal Revenue Service (IRS) requires that a red dye, identified as Solvent Red 164 (alkyl derivatives of azo benzen azo naphthol) must be added to all non-taxable diesel fuel as a means of identification. The minimum concentration is provided in 40 CFR Part 80.

**FUEL OIL, INTERMEDIATE, GRADES RMB-10 (IFO 60)/RME-25(IFO 180)/RMG-35(IFO 380)**  
(product shall conform to ISO 8217:1996 or ASTM D 2069-91. Product conforming to ASTM D 2069-91 shall meet the following additional requirements)

	981.0	991.0	991.0	
Density@15°C, kg/m <sup>3</sup> , max	981.0	991.0	991.0	ISO 3675/12185
Aluminum + silicon, mg/kg, max	80	80	80	ISO 10478
Total Sediment, potential, % (m/m), max	0.10	0.10	0.10	ISO 10307-2

**FUEL OIL, BURNER** (Grades 1/2/4/4/[Light]/5[Light]/5[Heavy]/6, Latest Rev of ASTM D 396)

(a) The following standards apply only to fuel oils for OCONUS PC&S:

(1) If the specified sulfur limit for Fuel Oil No. 6 is 1.0 mass % or less, the maximum pour point shall be 15°C (60°F).

(2) Burner fuel oils shall conform to U.S. Environmental Protection Agency standards for waste/used oil found in 40 CFR 266 or State or local government requirements, whichever are more stringent. The following minimum standards apply:

CONSTITUENT/PROPERTY	ALLOWABLE LEVEL	TEST METHOD
Arsenic	5 PPM maximum	SW-846
Cadmium	2 PPM maximum	SW-846
Chromium	10 PPM maximum	SW-846
Lead	100 PPM maximum	SW-846
Total Halogens	1,000 PPM maximum	SW-846

NOTE: Copies of SW-846 (Test Methods for Evaluating Solid Waste) can be obtained from the U.S. Government Printing Office, Washington, DC 20402, stock number 955-001-00000-1)

The following standards apply only to fuel oils for domestic and overseas Bunkers:

- (1) The maximum sulfur requirement shall be as stated in the DFSC schedule.
- (2) Fuel Oil No. 6 shall have a maximum density of 0.993 kg/L or a minimum API Gravity of 11.0.
- (3) Fuel Oils No. 4 (Light), No. 5 (Light), No. 5 (Heavy), and No. 6 shall have a minimum flash point of 60°C (140°F).

**EXEMPTIONS:** The above standards shall apply for all DFSC contracts cited in the referenced schedules; however, please note specific exemptions annotated herein concerning delivery, fuel specs, etc. that have been approved by the Government and are a material part of the fuel contracts. These exemptions take precedence over respective standards/specifications as stated in the fuel contracts.

### UTILIZATION OF DFSC BUNKER FUEL CONTRACT(S)

(1) In order to correctly utilize DFSC bunker fuel contracts, where available, it is recommended that the Contractor review "Ships' Bunkers Bulletins" which provides information regarding contract awards, including award date, contractor name and telephone number, special notes, etc. Although the FISC San Diego Contracting Officer/Ordering Officer will place the fuel order directly with the authorized fuel contractor, the Husbanding Agent is responsible for contacting the fuel contractor and arranging for delivery of all fuel ordered under this contract. Ships' Bunkers Bulletins may be accessed via the Internet, utilizing either Netscape Navigator or NCSA Mosaic web browsers, at <http://www.dfsc.dla.mil/main/p/special/bulletin.htm>, OR through the DFSC Homepage at <http://www.dfsc.dla.mil>.

(2) All deliveries of fuel, whether made under existing Government bunker fuel contracts or purchased in the open market, shall be free on board the vessel unless otherwise indicated. All deliveries shall be made on the date and time specified in the delivery order provided that the Fuel Contractor has received the delivery order AT LEAST 24 hours prior to the specified delivery time. (See DFSC Contract 97-D-0017 for specific information regarding minimum delivery quantities, minimum notice required by the Contractor for placement of orders, barge unloading conditions, overtime requirements (including allowability of night time deliveries, applicable detention charges, delivery conditions (wharf/pipeline, barge, tank truck/trailer and tank wagon), and determination of quantity delivered. FOR ALL METHODS OF DELIVERY, THE RECEIVING VESSEL SHALL BE PRESENT TO WITNESS THE METHOD OF DELIVERY AND SHALL VALIDATE THAT NO PRODUCT REMAINS IN THE CONVEYANCE (when calibrated meters are not used). Any cargo not delivered which is returned to the Fuel Contractor shall be annotated on the delivery ticket, receipt or other delivery document.

(3) Fuel orders under existing DFSC contracts are funded by DFSC for DoD activities and US Coast Guard; DoD activities include US Navy, Military Sealift Command, U.S. Army (including the Corp of Engineers) and National Guard. The DFSC accounting and appropriation data will be cited on each individual delivery order issued by the Contracting Officer/Ordering Officer.

(4) DFAS Columbus is the paying office only for fuel delivered under DoD and US Coast Guard orders placed under this contract and for all open market purchases of fuel delivered directly into a DoD or US Coast Guard vessel. The paying offices cited in the contract for U.S. Navy and U.S. Coast Guard orders will be responsible for payment of additional charges incurred as a result of a fuel delivery (i.e. overtime, detention charges, etc.). The FISC San Diego Ordering Officer will issue a separate order to the Fuel Contractor for incurred and accepted additional charges, identifying the appropriate paying office and citing the applicable accounting and appropriate data for such charges. SUCH CHARGES ARE NOT TO BE PAID UNLESS THE FUEL CONTRACTOR PROVIDES VALID DOCUMENTATION SUPPORTING ALL INCURRED ADDITIONAL COSTS.

(5) The FISC San Diego Ordering Officer is authorized by DFSC to modify delivery orders for fuel in order to accommodate any last minute changes necessary, including partial or total termination for convenience upon mutual agreement with the Fuel Contractor. Such changes may be required if the vessel's port visit is canceled; if the vessel's schedule changes; or if the vessel is unable to take on the full quantity ordered, which may result in the Contractor having to back haul the fuel to the designated supply point. Note that quantity reductions may result in additional charges to the Government due to the Fuel Contractor incurring cost for back haul, demurrage, and product downgrading.

(6) A copy of the product full specification (terminal and/or delivery conveyance) analysis shall be provided to the receiving vessel at the time of each delivery. Test reports may be provided in lieu of a full specification analysis.

(7) The need for Quality Assurance Representatives (QAR's) is eliminated; however, if the requiring vessel deems inspection necessary, it may do so at it's own expense. In the event sample test results do not conform to the contract specifications, the Government may exercise it's post-acceptance rights under the contract and direct the Fuel Contractor to immediately remove the fuel at the Fuel Contractor's expense. Detainment of the Government vessel for fuel removal will be at the Fuel Contractor's expense. The Fuel Contractor may also be charged for any additional cost of inspection or test when prior rejection makes reinspection or retest necessary.

(8) The Husbanding Agent shall IMMEDIATELY notify the FISC San Diego Ordering Officer of any delivery problems, such as late deliveries, fuel spills, quantity disputes, etc.; any disagreements between the Husbanding Agent and/or the requiring vessel and the Fuel Contractor, and operational problems or off spec fuel. The Ordering Officer will report such instances to the appropriate DFSC Contracting Officer and/or Quality Control Department.

(9) Unit and/or total prices cited on delivery orders will be based on most current pricing available at time delivery order is issued. DFSC issues price change modifications on a weekly basis via Price Change Supplements to applicable Bulletins; the payment office cited for fuel invoices will pay the unit price cited on the invoice or the unit price cited on the DFSC price change modification in effect on the date of delivery, whichever is less.

(10) Requiring/Receiving vessels shall ensure that the Fuel Contractor's delivery receipt, commercial bunker receipt, invoice, or other appropriate document is properly certified (date of delivery, quantity, etc.), signed and annotated by authorized ship's personnel IMMEDIATELY following delivery of fuel so that the Fuel Contractor may promptly submit invoices. The ship's signature is essential in cases where the Contractor offers discounts for early payments.